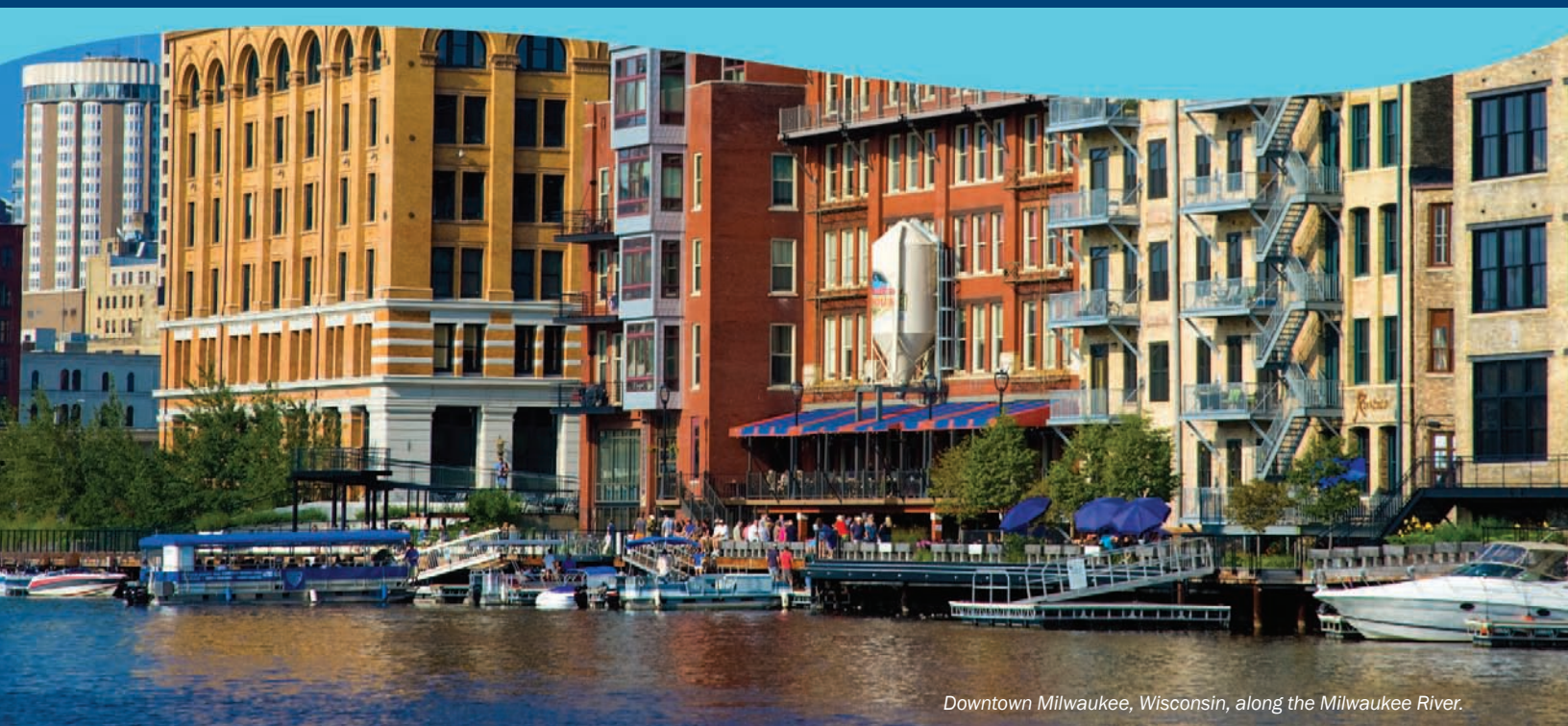


## Revitalizing Local Waterfront Economies: Investing in the Great Lakes



Downtown Milwaukee, Wisconsin, along the Milwaukee River.

### A Water-based Economy

Cleaning up contaminated harbors and rivers opens communities to redevelopment, business growth, increased property values and expanded tourism. Federal funding can cover up to 65 percent of contaminated sediment cleanup costs across the eight-state Great Lakes region. All that is needed to unlock this opportunity is partners—states, municipalities, industries and businesses—to contribute the remaining matching funds. Strategic cleanups provide important investments that can revitalize local economies and protect the environment.

The Great Lakes are the foundation of an economy that provides everything from the cars we drive, to the food we eat and water we drink. Their shorelines supply an essential quality of life for residents and visitors alike, abundant fresh water for cities and water-dependent industries, a maritime highway for raw materials and finished goods, and a thriving tourism industry based on world-class boating, fishing, beaches and other recreational opportunities. Millions of dollars in revenue come to the communities around the basin that help support some 35 million people who call the Great Lakes home with more than 1.5 million jobs and \$62 billion in annual wages.

Too often areas are degraded from toxic chemicals and other forms of pollution, causing local governments and businesses to lose sources of income and recreation. To fully leverage the Great Lakes and maintain our region's quality of life, we must invest in waterfront communities because they are important engines for economic growth and contribute to the region's and nation's prosperity.

#### The direct economic benefits of restoring the Great Lakes total at least \$50 billion. Restoration will:

- Lead to direct economic benefits of \$6.5 billion to \$11.8 billion from tourism, fishing, and recreation.
- Directly raise coastal property values \$12 billion to \$19 billion by remediating Areas of Concern (AOCs).
- Reduce costs to municipalities by \$50 million to \$125 million.
- Yield a \$2–\$3 return for every \$1 spent.
- Make the region more attractive to business and workers.

From the Brookings Institution, **"Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem,"** September 2007





Chicago waterfront, Lake Michigan.

# Restoring the Centerpieces of our Coastal Communities

Contaminated sediment in the 30 Areas of Concern, together with degraded former industrial sites, or brownfields, are major impediments to communities struggling to revitalize their waterfronts with new commercial enterprises, real estate and recreational amenities that can boost tourism.

Sediment is most often contaminated with toxic chemicals such as polychlorinated biphenyls (PCBs), heavy metals like mercury, and oil, grease or other petroleum byproducts. Before modern pollution laws went into effect, these pollutants settled into sediment at the bottom of rivers and harbors that flow into the

## Great Lakes Areas of Concern

In the 1980s, the United States and Canada identified 43 highly degraded shoreline areas along the Great Lakes, including 26 on the U.S. side and 17 in Canada, with five shared between the two countries. Known as “**Areas of Concern**” or “**AOCs**,” these areas are the focus of comprehensive cleanup efforts involving federal agencies, the Great Lakes states, municipalities and other partners. The most common problem affecting these toxic hotspots is contaminated sediment from past industrial practices. Today, 30 AOCs exist wholly in the U.S. or are shared with Canada.



lakes, where they continue to threaten public health, contaminate fish and wildlife, and make waterfronts unusable to our coastal communities.

Despite the complexity and expense of cleaning up the Areas of Concern, many states and local communities are seeing success from their past efforts. Federal funds are available to support cleanup efforts and help communities fulfill the promise of economic revitalization, increased property values and an improved quality of life. Under the Great Lakes Restoration Initiative (GLRI), the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and other federal agencies are prioritizing cleanups in the 30 AOCs.

The GLRI has enjoyed strong, bipartisan support in Congress, which has funded hundreds of millions of dollars in recent years. The Great Lakes states, municipalities and conservation groups are heavily engaged, and more than 700 restoration projects are already under way and making progress in communities across the region.

## Priorities Under the Great Lakes Restoration Initiative

- Cleaning up toxics and Areas of Concern.
- Combating invasive species.
- Promoting nearshore health by protecting watersheds from polluted run-off.
- Restoring wetlands and other habitats.
- Tracking progress and working with strategic partners.

**The GLRI Action Plan is online at [www.glri.us](http://www.glri.us).**

## Partnering to Revitalize Waterfront Economies

Under the first priority of the GLRI, the Great Lakes Legacy Act provides federal funding to accelerate the pace of contaminated sediment remediation in AOCs. The GLRI's Legacy Act has been a tremendous success. Since its passage, U.S. EPA has invested some \$288 million to clean up contaminated sediment in the AOCs, of which \$119 million has been leveraged from nonfederal sponsors. This work has resulted in cleanups at 10 sites, with four additional actions under way. More than 1.3 million cubic yards of contaminated sediments have been remediated to date. The Legacy Act program has also been used to evaluate 23 additional sites, at full federal expense, to characterize the extent of sediment contamination and position them for future cleanups.

A key reason for the success of the GLRI's Legacy Act is its ability to enable strong partnerships with states, federal agencies, municipalities and businesses through a collaborative approach to cleaning up contaminated sites. For this reason, some 34 companies from various industries have contributed more than \$50 million to Legacy Act cleanups, providing nearly half of all nonfederal contributions to date.

Completed cleanups have been a springboard for local communities to convert areas that were once a detriment to economic growth into valuable waterfront economic assets. These communities are transforming former toxic hotspots into amenities and building a foundation for future growth.

**Much progress has been made in restoring the Great Lakes over the past 30 years—it is one of the major environmental success stories of our time—but much more remains to be done. If appropriate investments are made, the lakes themselves have the potential to help drive the revitalization of the region, and there will be significant increases in employment from the projects themselves as well as from their long-term impact on the economy.**

*From "An Agenda for Jobs and Economic Transformation in the Great Lakes Region,"  
Great Lakes Metro Chambers Coalition*

**The opportunity for the Great Lakes region to thrive economically, as a center of innovation and as an environmentally sustainable 'clean-green' playground for our nation's people to live and work is unrivaled.**

**Ned Gramlich**, Former Federal Reserve Board Governor

**These are just a few of the 34 industries that have partnered with U.S. EPA to implement cleanups under the Great Lakes Legacy Act:**

- GenCorp, Inc.
- Honeywell, Inc.
- U.S. Steel Corp.
- Wisconsin Public Service Corp.
- Consumers Energy Company
- BP-Husky Refining LLC
- BASF Corp.
- Legacy Site Services LLC (for Arkema, Inc.)





Kinnickinnic River, Milwaukee. Image of the river before (above, left) and after (above, right and below).

## Business Growth at a Wisconsin Urban Waterfront

### Kinnickinnic River, Milwaukee

The Kinnickinnic River, south of downtown Milwaukee, has been plagued by contaminated mudflats, a dilapidated shoreline and limited capacity for navigation. These blighted conditions threatened the viability of existing businesses and hampered new economic development. Following the removal of more than 158,000 cubic yards of toxic sediment in 2009, the river is open for boat traffic, the shoreline has been upgraded and the area now enjoys a newly thriving marina, an expanded waterfront brewpub and revitalized boating. Another business is investing in its own facilities as well as adjacent properties with renewed confidence that its investments will pay off in the revitalized neighborhood.

**Generating the match:** The Kinnickinnic River cleanup was the result of planning and collaboration among U.S. EPA, Wisconsin Department of Natural Resources, U.S. Army Corps of Engineers, the City and Port of Milwaukee, and local stakeholders. A local business improvement district formed to support the project and upgrade seawalls in the project area. The Legacy Act provided 65 percent of the project's \$22 million cost, with the remaining 35 percent coming from Wisconsin's Great Lakes sediment cleanup bond program.

Milwaukee's support for the Kinnickinnic River project was motivated by environmental and economic interests: to preserve local businesses and promote development along the river while protecting its natural and scenic qualities. The benefits are now clear: a revitalized waterfront, growing businesses and a restored river for the entire city. The sediment cleanup and subsequent business investments have revitalized a formerly neglected part of the city and made the Kinnickinnic River a vital part of the local economy that will pay dividends for decades.

### Economic Benefits of the Cleanup

The completion of the cleanup on the Kinnickinnic River has made the waterfront a destination for business, recreation and tourism. The Legacy Act provided needed investments that directly benefited Milwaukee by:

- **Adding more than 100 jobs, immediately after the project finished, with the potential for more.**
- **Supporting more than \$1 million in wages for the new workers hired.**
- **Increasing revenue along the Kinnickinnic River, seeing more than a 30 percent increase when Pier Milwaukee reopened alone.**
- **Creating and restoring 26 boat slips, with more than 23 more planned, yielding the potential for increased revenue from slip rentals and tourism dollars.**

What was once an area plagued by contaminated sediment is now a popular spot for boating, volleyball, broomball, brewery tours and concerts.



**If not for the river sediment cleanup, we never would have invested in redeveloping the old foundry site.**

**Dave Ferron**, Property and Real Estate Manager,  
Paul Davis Restoration

**Without the dredging and cleanup of the Kinnickinnic River, this boatyard would be out of business.**

**Chris Svoboda**, Owner, Pier Milwaukee

*Note: Information based on available data from Legacy Act partners.*



## Other Successful Revitalization Partnerships

### Bringing Boats Back - Ashtabula River, Ohio

For years, navigation on the Ashtabula River, located near the southern shore of Lake Erie, was restricted due to the buildup of toxic sediment on the river bottom. Now the boats have returned – commercial vessels and pleasure boats. In 2007, U.S. EPA, the Ashtabula City Port Authority and a group of local industries completed the largest cleanup to date under the Legacy Act on the Ashtabula River. The project removed nearly 500,000 cubic yards of contaminated sediments, containing 25,000 pounds of toxic PCBs and other contaminants.

By deepening the river, the project has allowed for the return of normal commercial navigation and recreational boating on the river and in the harbor. This will generate substantial, long-term economic benefits by ensuring the future viability of the Port of Ashtabula, which moves more than 10 million tons of coal annually and ranks among the top 10 busiest ports in the Great Lakes. The project will also contribute to the removal of fish consumption advisories on the river and reduce toxic pollution flowing into the open waters of Lake Erie.



Recreational boats passing under the Sixth St. lift bridge on the Ashtabula River. As a result of the cleanup, fishing in the river has improved, charter fishing boats are returning, recreational boats are no longer being damaged by shoaling on the river bottom, and retail outlets in Ashtabula Harbor are enjoying increased business activity.

### Thriving Streetscape from the Shores of a Black Lagoon - Detroit River, Michigan

For decades the Black Lagoon, now Ellias Cove Park, located near the City of Trenton, was a trap for pollution. It received its name from the oil and grease contamination that gave the bay its dark color. After completion of the first-ever Legacy Act cleanup, the site is no longer black and has served as a catalyst for revitalizing the city's entire 240-acre shoreline and waterfront district. Trenton has completed a downtown streetscape and there are plans for riverside condominiums, restaurants, shops and a river walk. It's estimated that nearby property values will increase by \$60 million or more.



Following the contaminated sediment cleanup, natural habitat was restored along the shoreline and a park was established for local residents.

### Toxic Hotspot to Vacation Destination - Muskegon Lake, Michigan

Located on the east shore of Lake Michigan, the lake was once lined with heavy industries. After they left, what remained was severely degraded shoreline, widespread contaminated sediment and diminished fish and wildlife resources. Concerted efforts by the City of Muskegon and state and federal agencies have remediated much of this pollution and the restoration project is putting this once-toxic hotspot on the path to being a vacation hotspot. Now the community is developing bike trails and promoting outdoor recreation and other tourism-friendly activities. This investment, together with other shoreline restoration projects, is expected to increase property values by \$12 million and contribute \$600,000 in new tax revenues annually. The city expects 65,000 new visitors to the lake, which would generate more than \$1 million in new recreational spending. Total economic benefits could exceed \$66 million, yielding more than a 6-to-1 return on investment.



Grand Trunk shoreline restoration site on Muskegon Lake. Broken concrete, unnatural fill and other debris was removed and the shoreline was restored with natural habitat and structures for fish and wildlife.

### Restoring an Industrial Heartland - Grand Calumet River, NW Indiana

U.S. EPA and the state of Indiana are improving the environment in one of the most heavily industrialized areas of our country by remediating approximately 150,000 cubic yards of toxic sediment from a one-mile stretch of the Grand Calumet River in Hammond, Indiana. Indiana's portion of the project costs is coming from a settlement under the federal Natural Resource Damage Assessment program, which restores natural resources injured by pollution. This is the first Legacy Act project where this unique approach to generating matching funds has been used. Leveraging funding acquired to address environmental damages to the river has enabled Indiana to secure more federal funds and implement a substantially larger cleanup.



The contaminated sediment cleanup was a catalyst for restoring habitat and protecting numerous rare and endangered species. The GLRI has supported efforts by the state of Indiana, The Nature Conservancy, Shirley Heinze Land Trust, Save the Dunes Conservation Fund and Lake County Parks and Recreation Department to conserve globally rare dune and swale habitat along the river.





Cuyahoga River, Cleveland, Ohio.

## How Communities Can Take Advantage of the GLRI's Legacy Act

### Accelerating On-the-Ground Actions

The GLRI's Legacy Act was a response to frustrations over the slow pace of cleaning up contaminated sediments in Areas of Concern—or toxic hotspots—across the Great Lakes. This program provides an unparalleled opportunity to reinvest in the future of valuable shoreline properties. Many cleanup opportunities remain, and with support from the Great Lakes states, local leaders, industries, and other partners to secure nonfederal matching funds, more communities can realize a similar return on investment and leverage the full economic potential of their waterfront areas.

### How it Works

The Legacy Act requires that at least 35 percent of project costs be provided by a nonfederal sponsor, with U.S. EPA providing up to 65 percent. Nonfederal sponsors must also cover 100 percent of the project's operation and maintenance costs. The nonfederal contribution may include in-kind services from a nonfederal sponsor, or funds or services provided under a settlement agreement or judicial consent decree. However, funds provided as part of a unilateral administrative order or court order cannot be used as the nonfederal cost share.

### Advantages of the Legacy Act:

- Aligns partners in risk/benefit decisions
- Focuses on getting work done
- Provides a quick process
- Saves money by allowing for timely field decisions
- Integrates remediation and restoration

**The Legacy Act focuses on projects and achieving efficient and effective results.**



## Approaches for Generating Nonfederal Cost Share

U.S. EPA's rules for administering the program allow for projects to be proposed by a variety of nonfederal sponsors, including entities that may bear some legal responsibility for the pollution being cleaned up. Several different approaches can be used to generate the cost share:

### **Linking waterfront land revitalization and sediment cleanup efforts:**

An investor (such as a port authority or developer) provides nonfederal match for a Legacy Act cleanup associated with a waterfront revitalization project. The investor benefits when cleaning up the contaminated site increases the value of, and potential revenues from, an adjacent site. Studies show significant potential for economic revitalization associated with contaminated sediment remediation.

### **Combining brownfield revitalization and contaminated sediment remediation:**

Activities from a nonfederal source to restore a brownfield site can be used as match for a Legacy Act cleanup associated with that site. By recognizing the connection between the upland and aquatic environments, this would be considered a more “complete” restoration effort.

### **Establishing public-private partnerships:**

Private entities are generally more amenable to entering into a Legacy Act project agreement if a public entity is a partner as well. This lends more credibility to the effort and generates support from a wider variety of partners.

### **Establishing a nonfederal coalition:**

Local entities can establish a coalition under the auspices of a not-for-profit organization to provide a venue for generating nonfederal match and coordinating cleanup efforts. This coalition could consist of industry, civic organizations, municipalities and academia. This allows for effective communication as it brings different perspectives and expertise to a potential project.

**State bond programs:** Bond programs can be used for the nonfederal match required for cleanups conducted under the Legacy Act. Michigan's Clean Michigan Initiative bond program included \$25 million that has been used to leverage millions in federal cleanup funds.

### **In-kind services:**

Project partners provide in-kind services as part of meeting their nonfederal match. These services can include activities like: 1) values of land, easements or rights-of-way for constructing or operating and maintaining the project; 2) staff time for individuals who work on the Legacy Act project; 3) construction materials or equipment usage for the associated project, and; 4) design or engineering services that are part of the project.

### **Using money or in-kind services provided under a settlement agreement or judicial consent decree:**

Work conducted under a settlement agreement in an AOC that addresses the area's environmental problems, including contaminated sediments, can be counted as a match for Legacy Act projects.

### **Using Clean Water State Revolving Funds:**

Under the Clean Water State Revolving Fund program, states provide a 20 percent match to U.S. EPA funds. Usually these funds are used to build or improve wastewater infrastructure, but they can also be used for nonpoint source projects as long as they are identified in the state's nonpoint source management plan under Section 319 of the Clean Water Act. While the grant funds from U.S. EPA and the required 20 percent state match are federal funds, loan repayments, earned interest and proceeds from state bonds are considered *nonfederal* funds. These nonfederal funds can be used as match for Legacy Act projects.

*Freighter unloading stone at Ashtabula Harbor. In addition to restoring valuable habitat and protecting Lake Erie from toxic pollution, the clean-up ensured the long-term economic viability of the Port of Ashtabula.*





Revitalized Detroit Riverwalk.

## Apply for a GLRI Legacy Act Project

The first step in developing a Legacy Act project is to contact staff with U.S. EPA's Great Lakes National Program Office. It is important to discuss a potential project informally before submitting a formal application. It is also advisable to consult with the appropriate staff with your state's environmental agency to determine their interest in the proposed project.

Legacy Act projects are reviewed on a first-come, first-served basis. Projects are funded as soon as the appropriate reviews are completed and agreements are signed with the nonfederal sponsor. Generally, the process proceeds in two stages:

- 1 An initial project agreement covers a preliminary investigation and feasibility study, and design of cleanup plans.
- 2 A second agreement covers implementation of the actual cleanup project.

U.S. EPA also conducts site characterizations at full federal expense to plan for cleanup work.

## More information

For more information on how projects are administered or to initiate a discussion on a potential Legacy Act project, contact **Marc Tuchman**, Great Lakes Legacy Act Program Manager, at 312-353-1369, [Tuchman.Marc@epa.gov](mailto:Tuchman.Marc@epa.gov) or visit [www.epa.gov/glla/](http://www.epa.gov/glla/). For more information on the GLRI visit [www.glri.us](http://www.glri.us). For all other inquiries contact **Peter Cassell**, 312-886-6234, [Cassell.Peter@epa.gov](mailto:Cassell.Peter@epa.gov).

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